

REMARKS

This document is submitted in response to the Office Action dated August 21, 2008. By this response, claims 1-20 are pending. All claims remain as originally or previously presented. In light of the following remarks, it is believed that all pending claims patentably distinguish over the cited references and should be formally allowed.

Substantively, claims 1-4 and 8-16 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 7,153,396 to Genser (“Genser”). In addition, claims 5-7 and 17-20 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Genser in view of U.S. Patent No. 6,484,568 to Griffith et al. (“Griffith et al.”).

As previously presented, independent claim 1 requires an instrument for intended use in monitoring or controlling a foam associated with a process or an object. The instrument includes a passive sensor for generating an output signal representative of an acoustic emission associated with the foam and a controller in communication with the passive sensor for receiving the output signal and providing a response. Further, independent claim 13 requires a method of monitoring and controlling a process involving a foam. The method includes the steps of detecting an acoustic emission of the foam and actuating a response based on the detected acoustic emission.

Genser teaches an evaporator device and related process for evaporating substances. Specifically, it discloses a rotating container for receiving a medium that contains the substance(s) to be evaporated, a drive means for rotating the container around an axis of rotation and a control mechanism that controls the drive means via a control signal. During the process, the medium may generate a foam, which decreases the evaporation capacity. As a result, two foam sensors (preferably, optic, infrared or radar sensors) are used to detect a foam formation in the inside of the container. One foam sensor transmits a signal received from the control mechanism and another foam sensor feeds a reflected signal from the foam of the medium to the control mechanism. The reflected signal is a direct measure for the expansion of the foam of the medium in the rotating container. Depending on the reflected

signal of the foam sensor, the control mechanism derives a control signal and adapts the rotating speed of the drive means and, thus, the rotating container.

An “anticipation” rejection under 35 U.S.C. § 102(e) requires “strict identity” between the prior art invention and the one claimed. *See Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (holding that an anticipating reference must describe all claimed aspects of the invention). The “mere possibility” that the claimed structure exists in the reference is inadequate to meet the “strict identity” requirement for a proper anticipation rejection. *See Continental Can Company USA v. Monsanto Company*, 948 F.2d 1264, 1269, 20 USPQ2d 1746 (Fed. Cir. 1991) (holding anticipation “may not be established by probabilities or possibilities”). Accordingly, Genser must expressly or inherently disclose the exact invention, arranged precisely as required in the claims, in order for the anticipation rejections to be sustained.

Contrary to the Examiner’s position, Genser does not teach each and every element of claim 1. Specifically, it fails to teach “a passive sensor for generating an output signal representative of an acoustic emission associated with the foam.” The Examiner contends that foam sensors 14 and 15 are “a plurality of passive sensors...(i.e. hydrophone) for generating an output signal representative of an acoustic emission associated with a foam.” *See Office Action dated 8-21-08, p. 2.* However, Genser expressly notes that “foam sensors 14 and 15 are preferably optic sensors or infrared sensors or also radar sensors” not hydrophones as contended by the Examiner. Although Genser notes that a variety of sensors may be used, including acoustic sensors, the acoustic sensors are used for measuring the acoustic vibrations from the rotating container, not detecting or generating an output signal representative of an acoustic emission of the foam. Thus, Genser does not disclose all the claimed aspects of claim 1 and therefore the rejection cannot stand.

Turning to claim 13, it requires a method of monitoring and controlling a process involving a foam, including the step of “detecting an acoustic emission of the foam.” As previously discussed, nowhere does Genser even remotely mention “detecting an *acoustic*

emission of the foam.” Instead, the only acoustic measurements disclosed in Genser relate to measuring the vibrations of the rotating container, not any acoustic emission of the foam. Genser thus does teach each and every required element of claim 13, and the anticipation rejection should therefore be withdrawn.

The Examiner also rejects claims 2-4, 8-12 and 14-16 as allegedly anticipated by Genser. However, these claims depend upon independent claims 1 and 13, respectively. As a result, these claims are also believed to be allowable. *See Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296, 63 USPQ2d 1597 (Fed. Cir. 2002) (noting that if an independent claim is not anticipated by the prior art, then its dependent claims, which necessarily include the limitations of the independent claim, are not anticipated either).

Moreover, a number of these dependent claims are patentable on independent grounds. For example, claim 2 requires that the controller’s response is “a signal for activating a source of foam suppressant positioned adjacent the liquid.” In rejecting claim 2, the Examiner merely states that Genser discloses “a signal for activating a source of foam suppressant positioned adjacent the liquid.” *See Office Action dated 8-21-08, p. 2.* However, the Examiner fails to cite any specific reference in Genser to support her contention that Genser teaches any source of a foam suppressant. Indeed, Genser does not even mention the use of a foam suppressant. Similarly, claim 9 requires that the passive sensor is “a hydrophone positioned at or below the surface of the liquid in the column.” As discussed above, the Examiner contends that sensors 14, 15 are hydrophones. Again, Genser does not mention the use of a hydrophone, and expressly notes that sensors 14 and 15 “are preferably optic sensors or infrared sensors or also radar sensors.” Finally, claim 14 requires “placing a passive sensor in acoustic communication with the foam.” The Examiner completely ignores this limitation because Genser does not mention “placing a passive sensor in acoustic communication with the foam” as required in claim 14.

Turning to the obviousness rejections, the Examiner admits that “Genser does not explicitly suggests [sic] a system for testing a mineral admixture for making concrete.” *See*

Office Action dated 8-21-08, p. 3. Nevertheless, the Examiner cites Griffith et al. for teaching a foaming apparatus for making a concrete/cement with the foam. Thus, she concludes that “[i]t would have been well known to...recognize the advantages and desirability of combining the device with a system for testing a mineral admixture for making concrete/cement as suggested by Griffith et al. to the apparatus of Genser.” *See id.*

Initially, a *prima facie* case of obviousness is lacking with respect to claims 5-7 because Applicant has already demonstrated that neither Genser nor Griffith et al. teach each and every element of independent claim 1 (upon which claims 5-7 depend). In particular, neither reference discloses “a passive sensor for generating an output signal representative of an acoustic emission associated with the foam.” The Examiner also fails to provide the necessary support for combining the references to make an obviousness rejection. As recently observed by the U.S. Supreme Court, “rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385, 1396 (2007) (*quoting In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) (“[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

The assertion that it would be “well known to...recognize the advantages and desirability of combining the device with a system for testing a mineral admixture for making concrete/cement as suggested by Griffith et al. to the apparatus of Genser” does not qualify as the requisite “articulated reasoning with some rational underpinning.” Rather, it is a “mere conclusory statement,” and does not provide any reason for the combination. Accordingly, a *prima facie* case of obviousness is lacking.

Turning to independent claim 17, it requires a method of testing a mix used to form concrete, including the step of “detecting one or more acoustic emissions from the mix.” In rejecting claims 17-20, the Examiner merely contends that “the claims are commensurate in

scope with claims 5-7 and are rejected for the same reasons.” *See Office Action dated 8-21-08, p. 4.* However, neither Griffith et al. nor Genser disclose “detecting one or more acoustic emissions from” any mix used to form concrete. Again, Genser fails to disclose detecting any acoustic emission of the foam/mix. Further, the Examiner does not (and could not) contend that Griffith et al. teaches detecting one or more acoustic emissions from the mix as required in claim 17. Accordingly, the Examiner has not established a *prima facie* case of obviousness and claim 17 should be held allowable.

In addition, dependent claims 18-20 are dependent upon independent claim 17. As a result, they are all believed to be allowable. *See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)* (holding that if an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious).

Finally, Applicant adds new claim 21, which uses “means plus function” language to characterize the invention. Neither of the references cited by the Examiner perform the identical function of detecting an acoustic emission of any foam and, therefore, this claim is believed to patentably distinguish over the art. New dependent claims 22-23 provide the necessary clear link or association with the disclosed structures for performing the functions.

In light of the foregoing, it is now believed that all pending claims are allowable. If any issues remain, the Examiner is encouraged to contact the Applicant’s attorney at the telephone number listed below in order to reduce costs and expedite the prosecution of this patent application. To the extent any fees are due for processing this response, the undersigned authorizes their deduction from Deposit Account 11-0978.

S.N. 10/588,091

Respectfully submitted,

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